

### Spiracoustic Plus™ Round Duct Liner System

#### Description

Spiracoustic Plus™ duct liner, bonded with a thermosetting resin, is specifically engineered to provide very high acoustical and thermal performance in round air ducts of virtually any size. Based on high-density fiber glass board technology, Spiracoustic Plus duct liner has factory-made, evenly spaced kerfs to allow the material to conform to the inside diameter of round air ducts. The airstream surface and transverse edges are protected with JM's factory-applied proprietary black Permacote® acrylic coating.

Johns Manville provides the finishing touches to Spiracoustic Plus round duct insulation with SuperSeal® coating products. These unique acrylic coatings are air-drying versions of the factory-applied airstream coating designed for fabrication and repair use. SuperSeal products help retain all the performance characteristics engineered into Spiracoustic Plus duct liner.

#### General Properties

Operating temperature (max.) – ASTM C411	250°F (121°C)
Nominal density	4.0 pcf (64 kg/m³)
Air velocity (max.) – ASTM C1071	6000 fpm (30.5 m/sec.)
Fungi resistance – ASTM C1338	Does not breed or promote
Fungi resistance – ASTM G21	No growth
Bacteria resistance – ASTM G22	No growth

#### Standard Thicknesses and Packaging\*

Spiracoustic Plus duct liner is available in cartons or on pallets in several size configurations. This packaging configuration applies to all product types: VSD (very small diameter), SD (small diameter) and LD (large diameter).

Description	Thickness	Sheet Size	
	in	in	mm
VSD, SD, LD	1	48 x 120 x 1	1219 x 3048 x 25
VSD, SD, LD	1½	48 x 120 x 1½	1219 x 3048 x 38
VSD, SD, LD	2	48 x 120 x 2	1219 x 3048 x 51

\*Reference packaging on back side.

#### Surface Burning Characteristics

Spiracoustic Plus duct liner meets the Surface Burning Characteristics and Limited Combustibility of the following standards:

Standard/Test Method

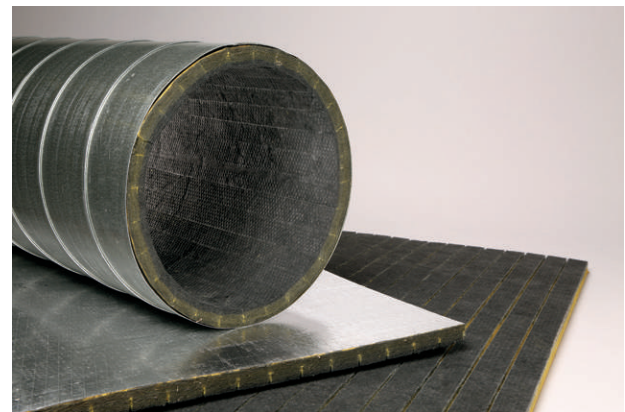
• ASTM E84	Maximum Flame Spread Index	25
• UL 723		
• NFPA 255	Maximum Smoke Developed Index	50
• NFPA 90A and 90B		
• NFPA 259		
• Canada: CAN/ULC-S102-M88		

UL labels supplied on packages when requested on order.

#### Specification Compliance

- ASTM C1071, Type II
- ASHRAE 62
- MEA# 237-86-M
- SMACNA Application Standards for Duct Liners
- NAIMA Fiber Glass Duct Liner Installation Standard

#### Recycled Content



#### Advantages

**Cost Effective.** Spiracoustic Plus duct liner eliminates the need for costly double-wall configuration in round air ducts.

**Improves Indoor Building Environment.** Improves indoor environmental quality by helping to control both temperature and sound.

**Resistant to Dust and Dirt.** The tough, acrylic polymer Permacote coating helps guard against the incursion of dust or dirt into the substrate, minimizing the potential for biological growth.

**Will Not Support Microbial Growth.** Permacote coating is formulated with an immobilized, EPA-registered agent to protect the coating from potential growth of fungi and bacteria.

Note: As with any type of surface, microbial growth may occur in accumulated duct system dirt, given certain conditions. This risk is minimized with proper design, filtration, maintenance and operation of the HVAC system.

#### Thermal Performance

Thickness	R-value		Conductance			
	in	mm	(hr•ft²•°F)/Btu	m²•°C/W	Btu/(hr•ft²•°F)	W/m²•°C
1	25	4.3	0.76	0.23	1.31	
1½	38	6.4	1.13	0.16	0.91	
2	51	8.4	1.48	0.12	0.68	

R-value and conductance are calculated from the material thermal conductivity tested in accordance with ASTM C518 at 75°F (24°C) mean temperature.

#### Sound Absorption Coefficients (Type "A" Mounting)

Thickness	Sound Absorption Coefficient at Frequency (Cycles per Second) of								
	in	mm	125	250	500	1000	2000	4000	NRC
1	25	0.05	0.21	0.71	1.01	1.07	1.09	0.75	
1½	38	0.10	0.39	1.02	1.08	1.04	1.00	0.85	
2	51	0.17	0.63	1.10	1.05	1.09	1.06	0.95	

Coefficients were tested in accordance with ASTM C423 and ASTM E795.

#### Green Building Attributes

GREENGUARD® certification is not intended for residential environments. Instead, the certification is intended only for buildings meeting ASHRAE 62.1-2007 commercial building ventilation rates. This certification is proof that the product meets the GREENGUARD Environmental Institute's indoor air quality standards and product emission standards for VOCs.



# Spiracoustic Plus™

## Round Duct Liner System

### Selection Table by Duct Diameter

#### Thickness: 1" (25 mm)

Product		Metal Duct ID		Finished ID	
Type	Description	in	mm	in	mm
VSD	Very Small Diameter*	8 (min) to 16	203 (min) to 406	6 (min) to 14	152 (min) to 356
SD	Small Diameter	18 (min) to 30	457 (min) to 762	16 (min) to 28	406 (min) to 711
LD	Large Diameter	32 (min) & up	813 (min) & up	30 (min) & up	762 (min) & up

#### Thickness: 1½" (38 mm)

Product		Metal Duct ID		Finished ID	
Type	Description	in	mm	in	mm
VSD	Very Small Diameter*	12 (min) to 20	305 (min) to 508	9 (min) to 17	229 (min) to 432
SD	Small Diameter	22 (min) to 38	559 (min) to 965	19 (min) to 35	483 (min) to 889
LD	Large Diameter	40 (min) & up	1016 (min) & up	37 (min) & up	940 (min) & up

#### Thickness: 2" (51 mm)

Product		Metal Duct ID		Finished ID	
Type	Description	in	mm	in	mm
VSD	Very Small Diameter*	14 (min) to 24	356 (min) to 610	10 (min) to 20	254 (min) to 508
SD	Small Diameter**	26 (min) to 58	660 (min) to 1473	22 (min) to 54	559 (min) to 1372
LD	Large Diameter	54 (min) & up	1372 (min) & up	50 (min) & up	1270 (min) & up

\*Fabrication Note: All Spiracoustic Plus duct liner VSD installations in metal duct must be sized for a "slip-fit" installation.

\*\*2" (51 mm) Spiracoustic Plus duct liner SD installations in metal ducts of IDs less than or equal to 30" (762 mm) must be sized for "slip-fit" installation.

Note: Minimum diameters are established to prevent damage to the liner during installation and must be observed.

### Packaging by Thickness

#### Thickness: 1" (25 mm)

	Sheets	Square Feet	Square Meter
Cartons	6 sheets/carton	240	22.3
Pallets	48 sheets/pallet	1920	178

#### Thickness: 1½" (38 mm)

	Sheets	Square Feet	Square Meter
Cartons	4 sheets/carton	160	14.9
Pallets	32 sheets/pallet	1280	119

#### Thickness: 2" (51 mm)

	Sheets	Square Feet	Square Meter
Cartons	3 sheets/carton	120	11.1
Pallets	24 sheets/pallet	960	89

### ISO 9000 Certification

Johns Manville commercial and industrial insulation products are designed, manufactured and tested in our own facilities, which are certified and registered to stringent ISO 9000 (ANSI/ASQC 90) series quality standards. This certification, along with regular, independent third-party auditing for compliance, is your assurance that Johns Manville products deliver consistent high quality.

### North American Sales Offices, Insulation Systems

#### Eastern Region

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Defiance, OH 43512  
(800) 334-2399  
Fax: (419) 784-7866

#### Western Region and Canada

P.O. Box 5108  
Denver, CO 80217  
(800) 368-4431  
Fax: (303) 978-4661



717 17th St.  
Denver, CO 80202  
1-800-654-3103  
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The physical and chemical properties of the Spiracoustic Plus™ Round Duct Liner System listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to ensure current information. **All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, including Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions, Limited Warranty and Limitation of Remedy and information on other Johns Manville thermal insulation and systems, call (800) 654-3103.**